

WHAT IS CLAIMED IS:

1. An isolated polynucleotide selected from the group consisting of:
 - (a) a polynucleotide encoding a polypeptide having the deduced amino acid sequence of SEQ ID No. 2 or a fragment, analog or derivative of said polypeptide;
 - (b) a polynucleotide encoding a polypeptide having the amino acid sequence encoded by the cDNA contained in ATCC Deposit No. 75824 or a fragment, analog or derivative of said polypeptide.
2. The polynucleotide of Claim 1 wherein the polynucleotide is DNA.
3. The polynucleotide of Claim 2 wherein said polynucleotide encodes a polypeptide having the deduced amino acid sequence of SEQ ID No. 2.
4. The polynucleotide of Claim 2 having the coding sequence deposited as ATCC Deposit No. 75824.
5. A vector containing the DNA of Claim 2.
6. A host cell genetically engineered with the vector of Claim 5.
7. A process for producing a polypeptide comprising: expressing from the host cell of Claim 6 the polypeptide encoded by said DNA.
8. A process for producing cells capable of expressing a polypeptide comprising genetically engineering cells with the vector of Claim 5.
9. An isolated DNA hybridizable to the DNA of Claim 2 and encoding a polypeptide having CGRP receptor activity.
10. A polypeptide selected from the group consisting of (i) a polypeptide having the deduced amino acid sequence of SEQ ID No. 2 and fragments, analogs and derivatives thereof and (ii) a polypeptide encoded by the cDNA of ATCC Deposit No. 75824 and fragments, analogs and derivatives of said polypeptide.

11. The polypeptide of Claim 10 wherein the polypeptide has the deduced amino acid sequence of SEQ ID No. 2.
12. An antibody against the polypeptide of claim 10.
13. A compound which activates the polypeptide of claim 10.
14. A compound which inhibits activation of the polypeptide of claim 10.
15. A method for the treatment of a patient having need of activation of a CGRP polypeptide comprising: administering to the patient a therapeutically effective amount of a compound of Claim 13.
16. A method for the treatment of a patient having need to inhibit activation of a CGRP polypeptide comprising: administering to the patient a therapeutically effective amount of the compound of Claim 14.
17. The polypeptide of Claim 10 wherein the polypeptide is a soluble fragment of the CGRP receptor polypeptide and is capable of binding a ligand for the receptor.
18. A process for identifying antagonists and agonists to the CGRP receptor polypeptide of claim 10 comprising:
expressing the receptor polypeptide on the surface of a cell;
contacting the cell with a receptor ligand and compound to be screened;
determining whether a second signal is generated from the interaction of the ligand and the receptor polypeptide; and
identifying if the compound to be screened is an agonist or antagonist.
19. A process for determining whether a ligand not known to be capable of binding to the polypeptide of claim 10 can bind thereto comprising:

contacting a mammalian cell which expresses the CGRP receptor with a potential ligand;

detecting the presence of the ligand which binds to the receptor; and

determining whether the ligand binds to the CGRP receptor.

20. A process for diagnosing a disease or a susceptibility to a disease related to a mutation in the polynucleotide sequence of claim 1 comprising:

determining a mutation in the CGRP receptor nucleic acid sequence in a sample derived from a host.

20251186 01320